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Factors that determine the reactivity of reactants in normal and catalysed Diels—Alder reactions

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Abstract

The effects of intermolecular stabilisation, the energies of the reacting bonds, and the geometry of the reactants on their reactivity in normal Diels—Alder reactions and those catalysed by Lewis acids have been analysed. The main causes of the small (1—102times) or large (104—109times) increase in the rate of the process in the presence of catalysts and the conditions for synthesising products which often cannot be obtained when the reaction is carried out in the absence of a catalyst are examined. The bibliography includes 190 references. © 1989 IOP Publishing Ltd.

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